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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HADDAD, MAHER M	
ART UNIT	**PAPER NUMBER**
1644	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/524,531	IMHOF ET AL.	
	Examiner	Art Unit	
	Maher M. Haddad	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The examiner of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Maher Haddad, Art Unit 1644, Technology Center 1600.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/03/04 has been entered.

3. Claims 21-34 are pending and under examination.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 25-26, 29-30, and 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Claims 25-26 are indefinite in the recitation of "highly stringent conditions" because the metes and bounds of such conditions are ambiguous and unclear and in the absence of a clear definition of the metes and bounds of this phrase it is unclear which conditions are actually claimed. It is noted that only final washing conditions are provided but no hybridization conditions are provided.

B. Claim 25 is indefinite for being in improper Markush format. The Office recommends the use of the phrase "selected from the group consisting of ..." with the use of the conjunction "and" in listing the species. See MPEP 706.03(Y).

C. Claims 29-30 are indefinite in the recitation "further comprising" because claims 29 and 30 do not recite a fusion protein that would further comprise the addition of amino acids 1-291 of SEQ ID NO:13.

D. Claims 32-33 are indefinite in the recitation "further comprising" because the term indicates adding an additional quantity of green fluorescent protein or flag sequence to an existing fusion protein.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 21, 24-34 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a New Matter rejection.

The phrases:

a) "having 86% sequence identity with the amino acid sequence of muCRAM-1" claimed in claim 21, lines 2-3,

b) "inhibiting vascular permeability" claimed in claims 21, line 7, claim 24 line 4, claims 25-26, lines 9-10, claims 27-28, lines 4-5,

c) "having 90% sequence identity" claimed in claim 24, line 1,

d) "hybridizes under highly stringent conditions" claimed in claims 25-26,, lines 5-6.

e) " an ability to promote cell adhesion, cell spreading and/or cell migration and vascular permeability activity" claimed in claims 25-26, lines 8-9 and claim 28, lines 4-5,

f) " that is 86% identical" claimed in claim 27, line 1-2,

g) "that is 90% identical" claimed in claim 28, lines 1-2,

h) "further comprising amino acids 1-291 of SEQ ID NO:", claimed in claims 29-30, lines 1-2, and

i) "amino acid 1 to the amino acid which includes at least a region encoding the single Ig(V) domain" and "amino acid 1 to the amino acid which includes at least a region encoding the two Ig(VC2) domains" claimed in claim 31(c-d).

represent a departure from the specification and the claims as originally filed.

Applicant's amendment filed 5-07-04 points to the specification at Figure2A and 2B and Figure 4, pages 5, 6, 16-18, 21, 27, 28 and 31, and that one could easily deduce that the identity between mouse CRAM-1 and human CRAM-1 is 86% for support for the newly added limitations. However, the specification does not provide a clear support for such limitations. While the examiner acknowledges that the identity between mouse and human is 86%, it is noted that Applicant is creating a subgenus claims with 86% that was not original disclosed. Regarding at

having 90% sequence identity, the examiner notices that the specification on page 6 refers to a nucleotide sequences rather than polypeptide sequences. Regarding "vascular permeability, the specification on page 4 lines 9-10 discloses that cell-cell interactions of quiescent endothelial cells regulate the vascular permeability and claim 7 as originally filed recites antibodies for use in the modulating, in particular increase of vascular permeability, no such activity (inhibition/promotion) were disclosed with the claimed polypeptides. Regarding the item (i) the specification on page 17, line35 to page 18, line 3 discloses Flag-tag fusion proteins were prepared using the hinge region for the one Ig soluble form or in the sequence encoding the region between the C2 and transmembrane domains for two Ig domains soluble molecules, Applicant is creating a subgenus of a fusion protein comprises any Ig(V) domain or any two Ig(VC2) domains from any protein . A subgenus is not necessarily implicitly described by a genus encompassing it and a species upon which it reads, see *In re Smith*, 458 F.2d 1389, 1395, 173 USPQ 679, 683 (CCPA 1972). The instant claims now recite limitations which were not clearly disclosed in the specification and recited in the claims as originally filed.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21, 24-34 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated polypeptide comprising the amino acid sequence of SEQ ID NOs: 13 and 15 and a fusion protein comprising amino acids 1-291 of SEQ ID NOs: 13 and 15 and a green fluorescent protein or a flag sequence does not reasonably provide **enablement** for a an isolated polypeptide "having 86% sequence identity" with the amino acid sequence of muCRAM-1 of SEQ ID NO: 13 in claim 21, or an isolated polypeptide "having 90% sequence identity" with the amino acid sequence of human hCRAM1 of SEQ ID NO:15 in claim 24, or an isolated polypeptide encoded by a nucleic acid, which hybridizes under highly stringent conditions to the complement of the nucleic acid of a nucleic acid encoding the amino acid of SEQ ID NO:13/15, wherein the isolated polypeptide has an activity selected from the group consisting of an ability to promote cell adhesion, cell spreading and or cell migration and vascular permeability activity in claims 25-26, the isolated polypeptide further comprising amino acids 1-291 of SEQ ID NO:13 and is capable of inhibiting leukocyte transmigration in claims 29-30 or an isolated polypeptide comprising an amino acid sequence that is 86% identical to the amino acid sequence of SEQ ID NO:13 in claim 27, An isolated polypeptide comprising an amino acid sequence that is 90% identical to the amino acid sequence of SEQ ID NO: 15 in claim 28, or any fusion protein comprising amino acid 1 to the amino acid which includes at least a region encoding the single Ig(V) domain/the two Ig(VC2) domains in claim 31. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and or use the invention commensurate in scope with this claim for the same reasons set forth in the previous Office Action mailed 12/03/03.

Applicant is relying upon certain biological activities and the disclosure of two species to support an entire genus. The claims as written encompass a broad genus of polypeptides with an unlimited number of possibilities with regard to the length of the polypeptide sequence. Further, the enablement issues of making the protein still remain because the specification does not teach and provide sufficient guidance as to which amino acid of SEQ ID NOs:13 and 15 would have been altered such that the resultant polypeptide would have retained the function of inhibiting the transendothelial migration of leukocytes. In addition, variation up to 14% of SEQ ID NO: 13 or 15 (43^{20}) provide a range of activities, not all which are necessarily predictive of inhibiting the transendothelial migration of leukocytes. Therefore, absent the ability to predict which of these polypeptides would function as claimed, and given the lack of data on regions critical for activity, for one of skill in the art to practice the invention as claimed would require a level of experimentation that is excessive and undue.

The terms "having" in claims 21, 24, "comprising" in claims 27-28, and "includes" in claim 31 are an open-ended and expand the fragments and variants of SEQ ID NO: 13 and 15 to include additional non disclosed amino acids on either of both sides of the N- and C- terminal of the polypeptide.

The fact that two nucleic acid sequences will hybridize under stringent conditions does not in and of itself require that the two sequences share any functional activity. Thus the same observations apply to the recitation of "a nucleic acid which hybridizes under highly stringent hybridization conditions". Further, it was well known in the art at the time the invention was made that hybridization could occur between two sequence based upon short stretches of 100% identity. Thus a great deal of sequence variability *with respect to the full-length nucleic acid* is possible. In the absence of a clear recitation that the identity is over the full length the claim reads on subsequences. Thus as for the recitation of hybridization language in the absence of limitations regarding the *sequence length over which the hybridization takes place*; does not allow the skilled artisan to make and use the hybridizing nucleic acids commensurate in scope with the instant claims without undue experimentation.

The instant claims encompass in their breadth any a polypeptide that "inhibits vascular permeability" in claims 21 and 24 or "promotes vascular permeability activity" in claims 25-29. However, these activities are mutually exclusive in that they reach opposing endpoints, and in that they employ structurally distinct *agonists* or *antagonists* to accomplish these mutually exclusive endpoints. The skilled artisan would not have a reasonable expectation that the same polypeptide used to inhibit vascular permeability would also serve to promote vascular permeability activity either in general or to obtain the desirable endpoint of treating any disease or disorder.

There does not appear to be sufficient guidance in the specification as filed as to how the skilled artisan would use the multifunctional polypeptides of SEQ ID NO: 13 and 15 recited in the instant claims. Due to the contradictory and seemingly mutually exclusive activity of the SEQ ID NO: 13 and 15, undue experimentation would be required of the skilled artisan to determine the effect of human and mouse CRAM-1 on any particular cell response in view of the instant

disclosure. Further, there is insufficient evidence or nexus that would lead the skilled artisan to predict the ability of SEQ ID NO: 13 or 15 to promote cell adhesion, cell spreading and/or cell migration. Even the capability of inhibiting leukocyte transmigration is limited to specific leukocyte such non-lymphoid leukocytes. The specification on page 27, lines 20-30 discloses that since the leukocyte populations were heterogenous, it was evaluated if sCRAM-Ig2Do acted on a specific leukocyte subpopulation or whether transmigration was blocked without specificity. The specification discloses that sCRAM-1-Ig2Do specifically blocked the transmigration of non-lymphoid leukocytes.

Applicant's arguments, filed 5/7/04, have been fully considered, but have not been found convincing

Applicant submits that both a population of nucleic acids (hybridization and percent variants) and a specific biological functional activity are provided in claims 21 and new claims 24-30. However, the claims fail to meet the enablement requirement for the "how to make" prongs of the U.S.C 112, 1st paragraph. The instant fact pattern fails to indicate that a representative number of structurally related CRAM-1 amino acid molecule is disclosed. The artisan would not know the identity of a reasonable number of representative CRAM-1 polypeptides falling within the scope of the instant claim and consequently would not have known how to make them. In order to satisfy 112, first paragraph, the specification has to teach how to make and use the polypeptides of the invention not how to identify the invention.

Applicant submits that the specification defines the highly stringent hybridization condition and provides methods for carrying out the hybridization reactions. However, as stated above such a recitation is insufficient to overcome the 112(1) rejections for the same reasons mentioned above. Further, one skilled in the art would not know what conditions are actually claimed since the specification on page 16, discloses only the temperature where the hybridization is performed and the washing conditions.

Applicant argues that the variants encompassed by amended claim 21 and new claims 24-30 are functionally defined in that the claimed variants are limited to those that are capable of inhibiting transendothelial migration of leukocytes, inhibiting and enhancing vascular permeability, and cell adhesion, spreading, and migration activity. Applicant submits that the specification provides working examples that teach one of skill in the art how to screen for these functional requirements in amended claim 21 and new claims 24-30.

Regarding applicant's argument that that the specification provides a working example and substantial guidance on how to identify polypeptides that have the recited activity, the examiner notices that in order to satisfy the U.S.C 112, 1st paragraph, the specification has to teach how to make and/or use the invention, not how to screen to identify the invention. Until the time when the 14% sequence identity polypeptides are found, then one skill in the art can make them.

6. Claims 31-33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant is in possession of an isolated polypeptide comprising the amino acid sequence of SEQ ID NOs: 13 and 15 and a fusion protein comprising amino acids 1-291 of SEQ ID NOs: 13 and 15 and a green fluorescent protein or a flag sequence.

Applicant is not in possession of any fusion protein comprising amino acid 1 to the amino acid which includes at least a region encoding the single Ig(V) domain/the two Ig(VC2) domains in claim 31.

Applicant has disclosed only amino acid of SEQ ID NO: 13 and 15 and the fusion protein of amino acid 1-291 of SEQ ID NOs: 13 and 13, the fusion protein comprising the soluble forms SEQ ID NOs: 13 and 15, wherein the soluble form is the one Ig soluble form (aa 1-138) or the region between the C2 (aa 1-238) and transmembrane domains of two Ig domains and a Flag-Tag sequence; therefore, the skilled artisan cannot envision all the contemplated amino acid sequence possibilities recited in the instant claims. Consequently, conception cannot be achieved until a representative description of the structural and functional properties of the claimed invention has occurred, regardless of the complexity or simplicity of the method. Adequate written description requires more than a mere statement that it is part of the invention. See *Fiers v. Revel*, 25 USPQ2d 1601, 1606 (CAFC1993). The Guidelines for the Examination of Patent Application Under the 35 U.S.C.112, ¶ 1"Written Description" Requirement make clear that the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species disclosure of relevant, identifying characteristics, i.e., structure or other physical and or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the genus (Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 20001, see especially page 1106 3rd column).

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the written description inquiry, whatever is now claimed." (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.). Consequently, Applicant was not in possession of the instant claimed invention. See University of California v. Eli Lilly and Co. 43 USPQ2d 1398.

Applicant is directed to the final Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e2) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Dumas Milne Edwards et al. (WO 99/0655 1, of record).

Dumas Milne Edwards et al teach a polypeptide comprises an amino acid sequence that is 100% identical to residues 1-89 of claimed SEQ ID NO: 15. Reference polypeptide of SEQ ID NO: 294 and the first 89 amino acids of claimed SEQ ID NO: 15 share 100% sequence homology then a nucleic acid encoding reference SEQ ID NO294 would hybridize under highly stringent conditions to the complement of a nucleic acid encoding the amino acid sequence of claimed SEQ ID NO: 15.

While the prior art teachings may be silent as to the "promote cell adhesion, cell spreading and/or cell migration, and vascular permeability activity" per se; the product in the reference is the same as the claimed product. Therefore "promote cell adhesion, cell spreading and/or cell migration, and vascular permeability activity" is considered inherent properties.

The reference teachings anticipate the claim invention.

Applicant argues that the nucleic acid encoding the amino acid sequence of SEQ IDNO:294 of Edwards et al would not hybridize to the nucleic acid sequence encoding the amino acid sequence of SEQ ID NO:15 under highly stringent conditions.

Contrary to applicant assertions referenced SEQ ID NO:294 has 100% sequence identity with amino acid 1- 89 of claimed SEQ ID NO:15. Therefore, a nucleic acid encoding referenced SEQ ID NO:294 would hybridize to claimed nucleic acid encoding the claimed SEQ ID NO: 15 under the claimed hybridization conditions due to the high sequence homology.

9. Claim 31 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,469, 155 B1.

The `155 patent teaches a fusion protein, sV(HIgR)-Fc and CTLA4-Fc represent soluble forms of receptors constructed by fusion of the V domains of HIgR, or the V domain of CTLA4, with the Fc portion of human IgG1 as claimed in claim 31(c) (see Fig 1 and col., 4, lines 19-22 in particular). The `155 patent further teaches sVCC(HIgR)-Fc and sVCC(PVRα)-Fc, represent soluble forms of receptors constructed by fusion of the VCC of HIgR, CTLA4, with the Fc portion of human IgG1 as claimed in claim 31(d) (see Figure 1 in particular).

The reference teachings anticipate the claim invention.

10. The following 102(e) rejection is applied because the EP 99200746.8 does not appear to provide adequate written support for a human CRAM-1 polypeptide, including the polypeptide of SEQ ID NO:15, or for any forms thereof.

11. Claims 23-24, 26, 28 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,635,468.

The `468 patent teaches a polypeptide, PRO1868, which is 310 amino acids long and 100% and having 100% sequence identity with the amino acid sequence of huCRAM1 of SEQ ID NO:15 (see Fig 124, and Patented SEQ ID NO: 423 and attached sequence alignment in particular). The ` 468 patent further teaches a signal peptide from about amino acid 1 to about amino acid 30, a transmembrane domain from about amino acid 243 to about amino acid 263, potential N-glycosylation sites from about amino acid 104 to about amino acid 107 and from about amino acid 192 to about amino acid 195, a cAMP- and cGMP-dependent protein kinase phosphorylation site from about amino acid 107 to about amino acid 110, casein kinase II phosphorylation sites from about amino acid 106 to about amino acid 109 and from about amino acid 296 to about amino acid 299, a tyrosine kinase phosphorylation site from about amino acid 69 to about amino acid 77 and potential N-myristolation sites from about amino acid 26 to about amino acid 31, from about amino acid 215 to about amino acid 220, from about amino acid 226 to about amino acid 231, from about amino acid 243 to about amino acid 248, from about amino acid 244 to about amino acid 249 and from about amino acid 262 to about amino acid 267 (see col., 255, under Example 103, in particular). A nucleic acid encoding polypeptide fragments would hybridized to the complement of the nucleic acid of SEQ ID NO: 15 under highly stringent conditions.

While the prior art teachings may be silent as to "inhibition of transendothelial migration of leukocytes and inhibiting vascular permeability" and "promote cell adhesion, cell spreading and/or cell migration, and vascular permeability activity" per se; the product in the reference is the same as the claimed product. Therefore, "inhibition of transendothelial migration of leukocytes and inhibiting vascular permeability" and "promote cell adhesion, cell spreading and/or cell migration, and vascular permeability activity" is considered inherent properties.

The reference teachings anticipate the claim invention.

12. No claim is allowed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maher Haddad whose telephone number is (571) 272-0845. The examiner can normally be reached Monday through Friday from 7:30 am to 4:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maher Haddad, Ph.D.
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June 18, 2004

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